ATTACHMENT SECTION C.8.,a.

8. Storage Requirements.

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.

1) Water wells, abandoned or operating
2) Surface waters
3) Springs
4) Public water supply(s)
5) Sinkholes
6) Underground and/or surface mines
7) Mine pool (or other) surface water discharge points
8) Mining spoil piles and mine dumps
9) Quarry(s)
10) Sand and gravel pits
11) Gas and oil wells
12) Diversion ditch(s)
13) Agricultural drainage ditch(s)
14) Occupied dwellings, including industrial and commercial establishments
15) Landfills or dumps
16) Other unlined impoundments
17) Septic tanks and drainfields
18) Injection wells
19) Rock outcrops

See Attachment Section C, 8., a.

b. A topographic map of sufficient detail to clearly show the following information:

1) Maximum and minimum percent slopes
2) Depressions on the site that may collect water
3) Drainageways that may attribute to rainfall run-on to or runoff from this site
4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding

c. Data and specifications for the storage facility lining material.

d. Plan and cross-sectional views of the storage facility.

e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. Land Area Requirements. Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. Landowner Agreement Forms. Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

11. Ground Water Monitoring.

Are any ground water monitoring data available for this land application site? __Yes __No

If yes, submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. Land Application Site Information.

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

a. Provide a general location map for each county which clearly indicates the location of all the land application sites.

b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.

8. Storage Requirements.

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.

1) Water wells, abandoned or operating
2) Surface waters
3) Springs **See Attachment Section C, 8., a.**
4) Public water supply(s)
5) Sinkholes N/A
6) Underground and/or surface mines N/A
7) Mine pool (or other) surface water discharge points N/A
8) Mining spoil piles and mine dumps N/A
9) Quarry(s) N/A
10) Sand and gravel pits N/A
11) Gas and oil wells N/A
12) Diversion ditch(s)
13) Agricultural drainage ditch(s)
14) Occupied dwellings, including industrial and commercial establishments
15) Landfills or dumps N/A
16) Other unlined impoundments
17) Septic tanks and drainfields
18) Injection wells N/A
19) Rock outcrops N/A

b. A topographic map of sufficient detail to clearly show the following information:

1) Maximum and minimum percent slopes
2) Depressions on the site that may collect water
3) Drainageways that may attribute to rainfall run-on to or runoff from this site
4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding

c. Data and specifications for the storage facility lining material.

d. Plan and cross-sectional views of the storage facility.

e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. Land Area Requirements. Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

See Attachment Section C, 9.

10. Landowner Agreement Forms. Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant. (N/A)

11. Ground Water Monitoring.

Are any ground water monitoring data available for this land application site? __Yes _X_No

If yes, submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

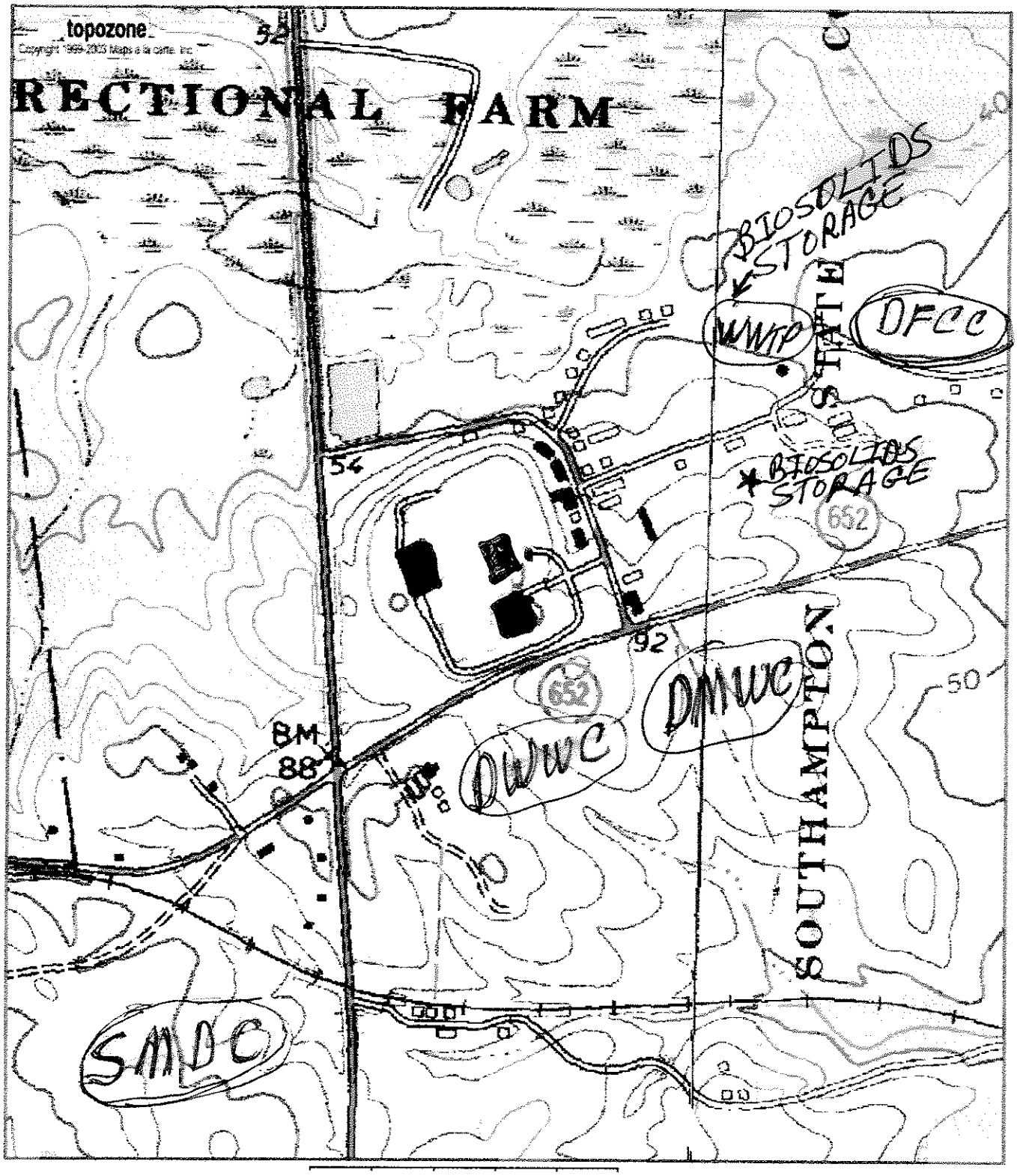
12. Land Application Site Information.

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

See Attachment Section C, 12., a., b., c., d.

a. Provide a general location map for each county which clearly indicates the location of all the land application sites.

b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.



0 0.1 0.2 0.3 0.4 0.5 km

0 0.09 0.18 0.27 0.36 0.45 mi

M*

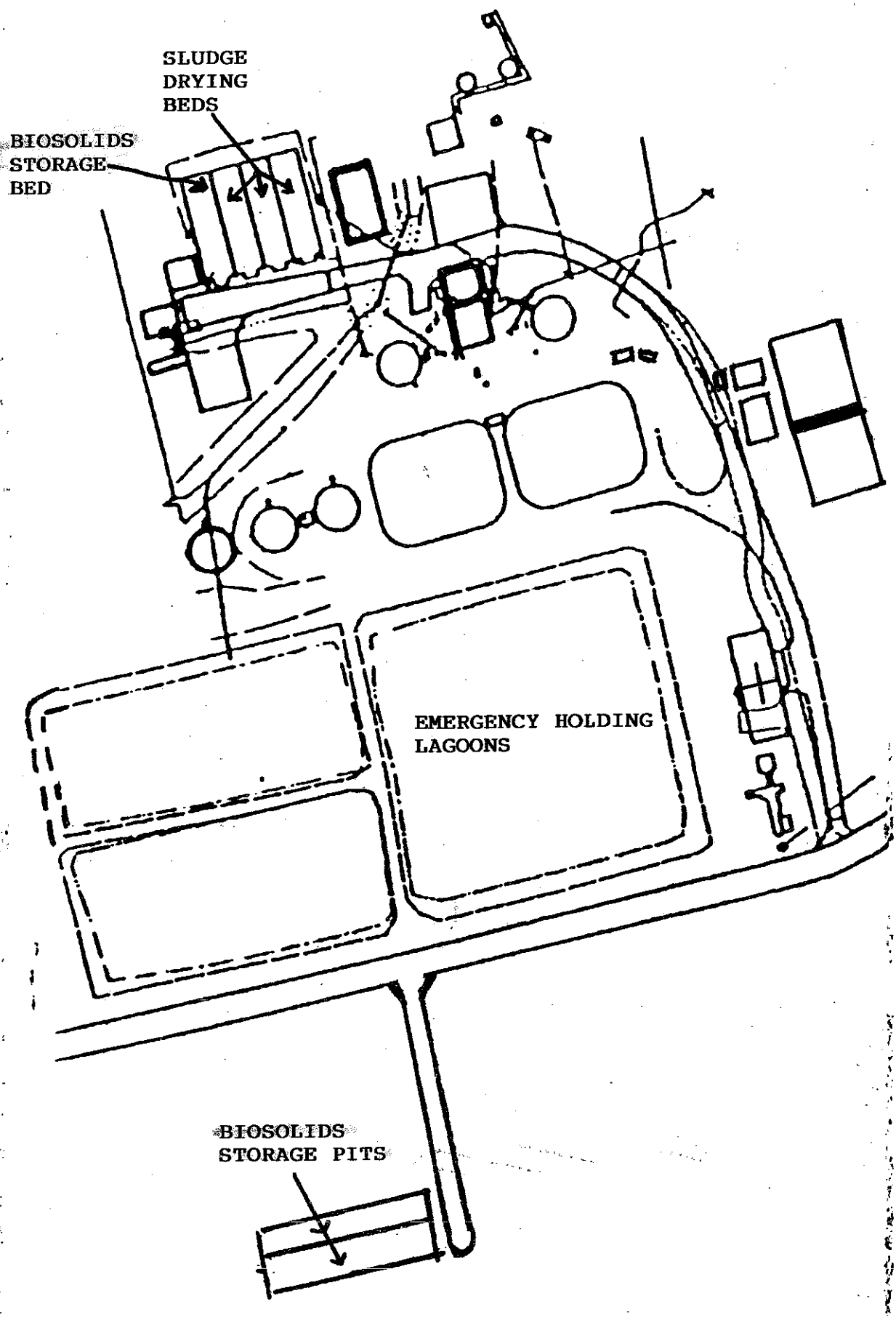
M=-10.073
G=-1.348

UTM 18 298742E 4066464N (NAD27)

Southampton State Correctional Farm, USGS Drewryville (VA) Quadrangle

Projection is UTM Zone 18 NAD83 Datum

WASTEWATER TREATMENT PLANT



GULF STATES MANUFACTURERS
A Division of Associated Building Systems, Inc.

P.O. Box 1128 • Starkville, Mississippi 39760 • (601) 323-8021 • Fax (601) 324-2984 • www.gulfstates-abs.com

July 14, 1999

R.J. STOVER & SON
1720 LAMBERT CT
CHESAPEAKE, VA. 23320

RE: SOUTHHAMPTON CORR
SOUTHHAMPTON, VA. 23829
JOB # 34894
RF 77'-0" X 120'-0" X 21'-6"
1:12 ROOF SLOPE

Gentlemen:
In accordance with purchase order documents, the referenced structure has been designed to withstand the loads as listed. The loads were applied as recommended by the BOCA, **National Building Code**, 1996 Edition. In addition to the dead load of the building components, the design loads are as follows:

LIVE LOAD (Reducible)	20 psf	WIND VELOCITY	80 mph
GROUND SNOW LOAD	15 psf	WIND Exposure Category	C
SNOW Exposure Factor	0.7	WIND Importance Factor	1.1
SNOW Importance Factor	1.0	SEISMIC PERFORMANCE CATEGORY	A
COLLATERAL LOAD	0 psf		

The building was designed in accordance with design specifications in the Ninth Edition of AISC Manual of Steel Construction and the 1986 Edition with 1989 Addendum of the AISI. Gulf States Manufacturers is an approved manufacturer in the **AISC Quality Certification Program** in the category of Metal Building Systems. Gulf States Manufacturers has AISC-MB Certified offices in Starkville, MS and Columbus, GA. The materials for this project will be manufactured in Gulf States Manufacturers AISC-MB Certified plant in Starkville, Mississippi.

The design of accessories such as doors, windows, translucent panels, louvers and ventilators are not included with respect to properties or use regardless of their source. Other parts of the project such as the foundation, existing buildings, masonry walls, mechanical equipment and erection of the building components are not part of the design by Gulf States Manufacturers. Effects on the building due to the excluded items that fail to withstand their required loads are not covered in this letter.

The building components should be erected in accordance with the referenced job number erection drawings on a properly designed foundation with anchor bolts of the diameter(s) and yield strength shown on the Gulf States anchor bolt plan. Field inspection of materials which are provided by Gulf States is the responsibility of the erector and/or overall project professionals. The foundation designer will find the column reactions with the referenced job anchor bolt setting plans.

To the best of my knowledge this design conforms with the load requirements of the building code and purchase order documents as previously stated. The undersigned is not the engineer-of-record for the overall project.

Sincerely:
GULF STATES MANUFACTURERS

Ralph E. Moellenhoff, P.E.
Senior Design Engineer
jwf
Enclosures (1)
cc: Matthew T. Nichols, P.E.
Design Engineer

COMMONWEALTH OF VIRGINIA
RALPH E. MOELLENHOFF
No. 17363
PROFESSIONAL ENGINEER

JUL 22 1999
R. J. STOVER & SON INC.

SPECIFICATIONS
FOR
STORAGE COVER STRUCTURE
SOUTHAMPTON CORRECTIONAL CENTER
CAPRON, VA 23829
IFB # 717:9-90

I SCOPE OF WORK

The contractor shall provide all materials, labor, supervision, equipment, tools, materials and incidentals necessary to furnish and install a steel storage shed at the Wastewater Treatment Plant at the Southampton Correctional Center. All equipment, materials and installation work shall comply with this specification, the Virginia OSHA Standards, and the Virginia Uniform Statewide Building Codes.

II GENERAL

STRUCTURE:

The building shall be manufactured by an AISC certified manufacturer, classification MB and shall include all columns, rafters, endwall columns, purling, girts, struts, clips, bracing, exterior covering, flashing, fasteners, , and any miscellaneous items necessary for a complete and weather-tight structure.

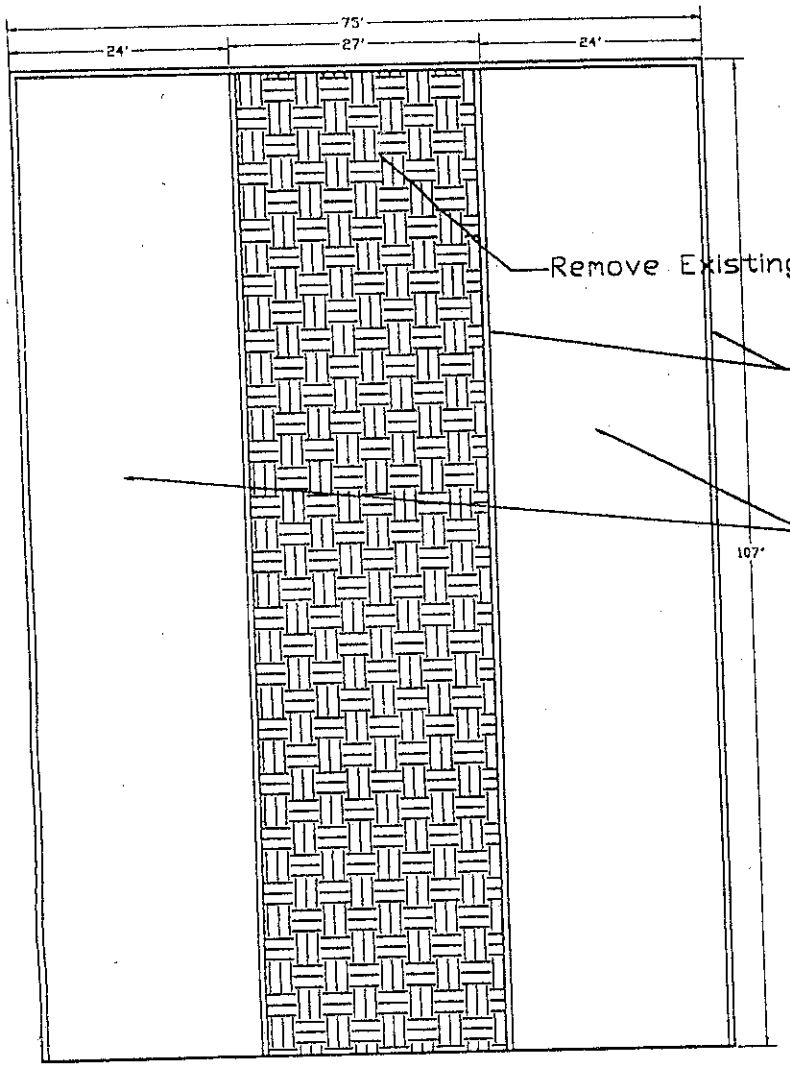
- 77' wide x 120' long x 18' clear eave height
- six 20' bays
- Steel Beam and truss primary framing
- Secondary framing purling and girts
- 1:12 roof slope metal roofing
- Metal panel exterior walls, 26 gauge side wall panels extend down from the eave to within 5' of grade
- Open ends
- Building designed to meet all applicable building codes of Virginia
- All exterior walls shall be "galvalume" coated with a a minimum of a 20 – year manufacturers warranty
- All framing menbers shall be carbon steel with factory applied paint primer finish
- All colors will be chosen from stock colors after the award.

Earthwork:

- Excavate and install concrete footings including all concrete, rebar and anchor bolts

Bidders shall state for the offered building the following:

Manufacturer: _____
Model no.: _____

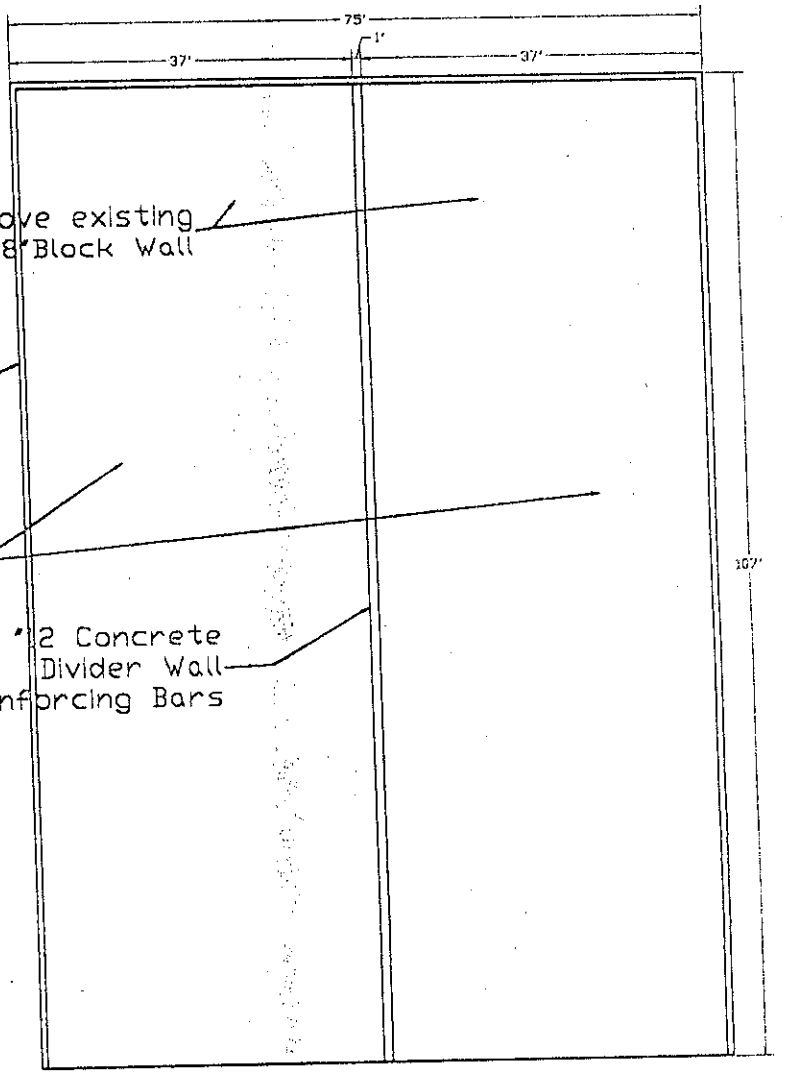


Present Bio-Solid Pit Layout

Remove Existing Soil

8" Block Wall

8" Thick Concrete Slab

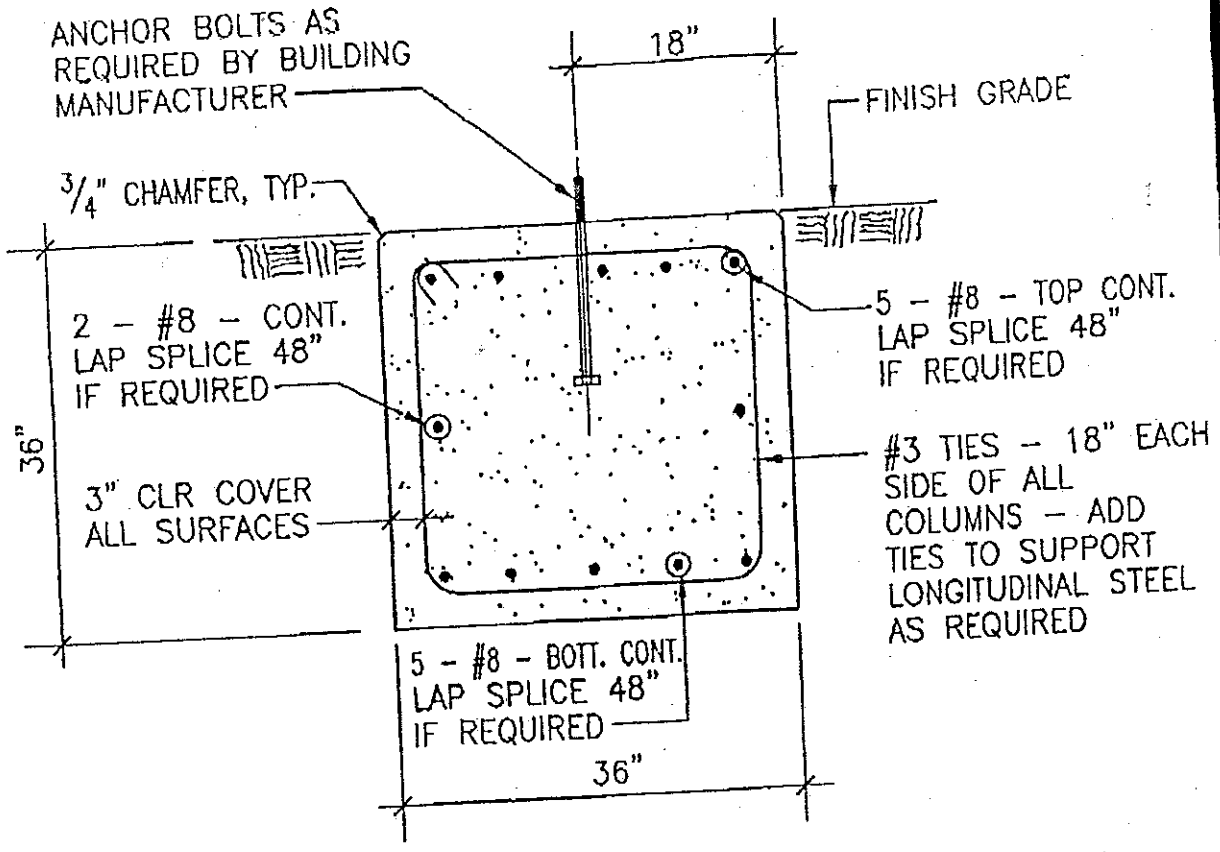


Remove existing 8" Block Wall

New "12 Concrete Divider Wall Reinforcing Bars

Proposed Bio-Solid Pit Layout

Bio-Solid Sludge Drying Pits
Southampton Correctional Center
DR. BY: Harvey M. Smith
Date: March 8, 2000
Scale: 1/16" = 1'



SECTION A-A

NOTE: FOOTING LENGTHS: 122' EACH (LOCATE @ COLUMN CENTERLINES)

MINIMUM CONCRETE STRENGTH: 4000 p.s.i. - CONTRACTOR TO VERIFY CONCRETE STRENGTH REQUIREMENTS FOR ANCHOR SYSTEM WITH BUILDING MANUFACTURER.

FOUNDATION DESIGN BASED UPON BUILDING FRAME REACTIONS PROVIDED FROM GULF STATES MANUFACTURER'S JOB 34894-0.

COMMONWEALTH OF VIRGINIA
KEVIN M. ROOMSBURG
No. 17101
8-12-99
PROFESSIONAL ENGINEER

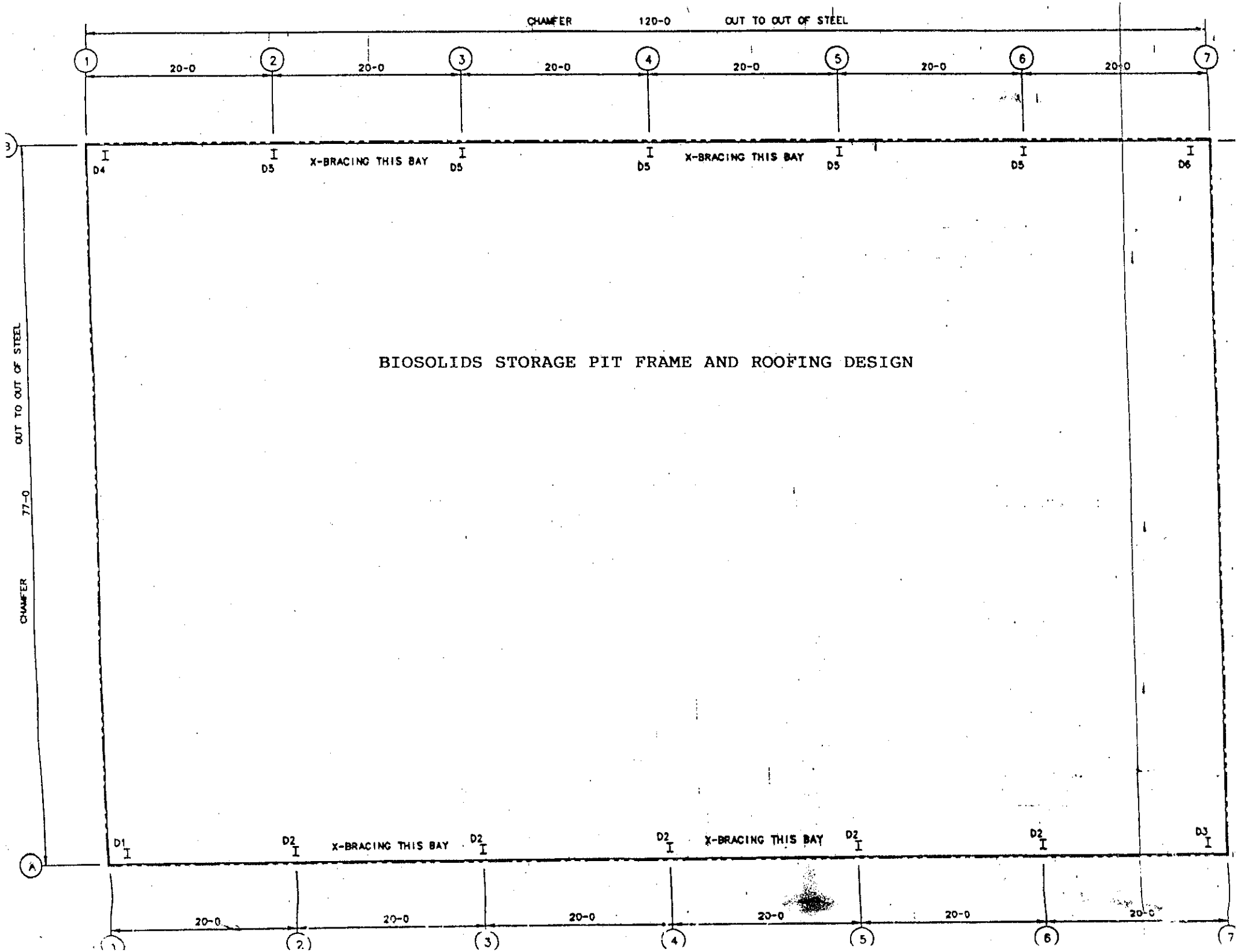
NRW ENGINEERING, P.C.
Consulting Engineers
Virginia Beach, Virginia

Scale: 3/4" = 1'-0"	Proj. No. 99.084	Drawn By: V.S.V.
Date: 8/10/99	Des. By: M.F.N.	Checked By: K.M.R.

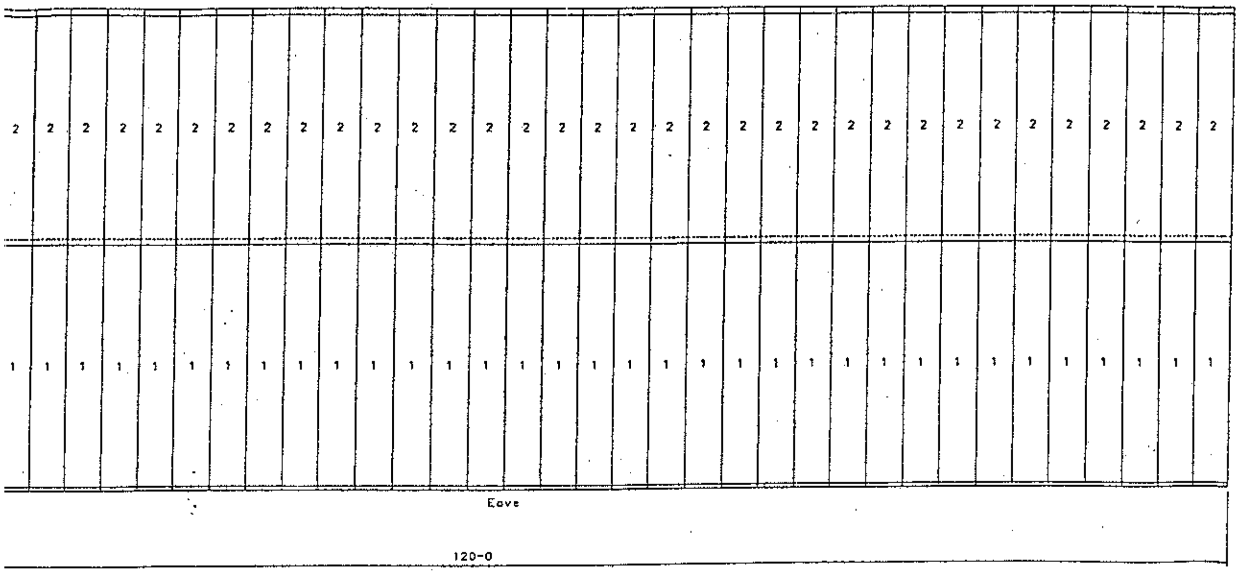
PRE-ENGINEERED BUILDING FOOTING
SOUTH HAMPTON CORRECTION FACILITY

FOOTING SECTION

S-1



BIOSOLIDS STORAGE PIT FRAME AND ROOFING DESIGN



MAKE TWO MK - HRP1X ROOF PANELS
HIGH RIB SHADOW PAN
26 GA
GALVALUME

ADDITIONAL CRITERIA

DESIGN CRITERIA

NO.	DATE	REVISION

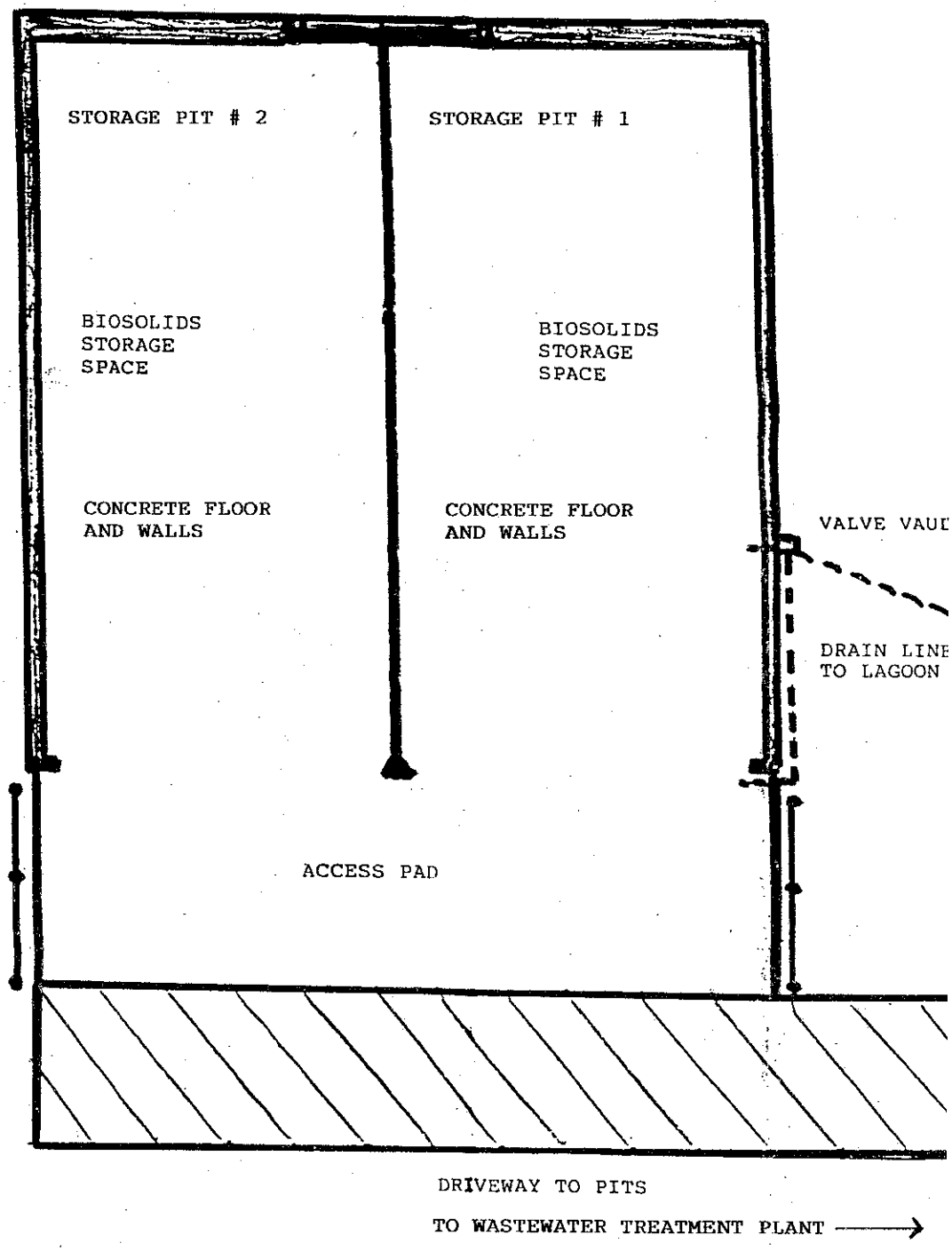
DRAWN BY 7/99
CHECKED MAP
APPROVED

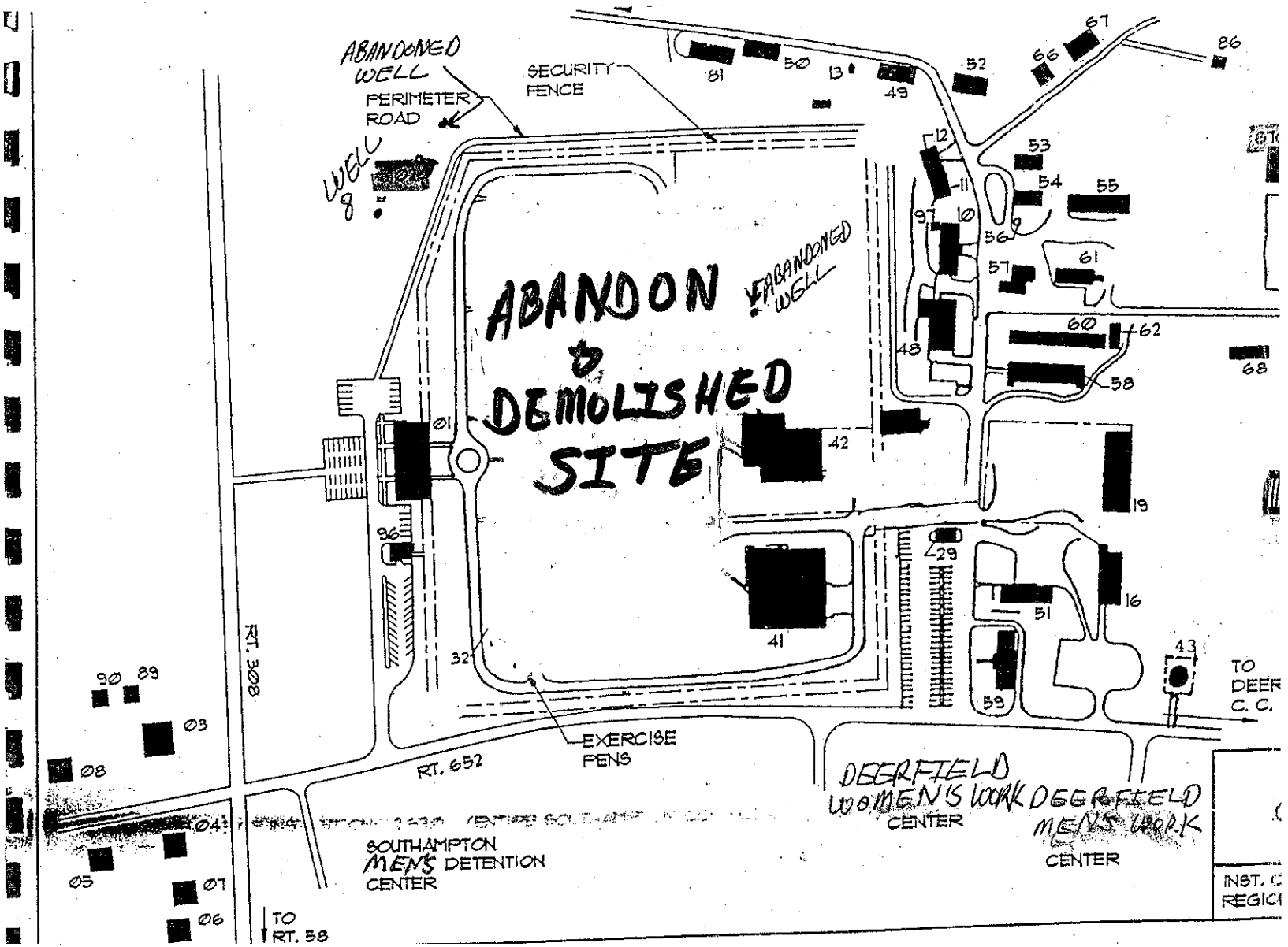
JOB NO. 348940

PAGE 5 of 5

SOUTHAMPTON CORRECTIONAL CENTER

SWINE PITS FOR BIOSOLIDS STORAGE




ABANDONED WELL
PERIMETER ROAD
SECURITY FENCE
WELL 8
ABANDON
ABANDONED WELL
DEMOLISHED SITE
RT. 308
RT. 652
EXERCISE PENS
SOUTHAMPTON MEN'S DETENTION CENTER
DEERFIELD WOMEN'S WORK CENTER
DEERFIELD MEN'S WORK CENTER
TO RT. 58
TO DEER C. C.
INST. C
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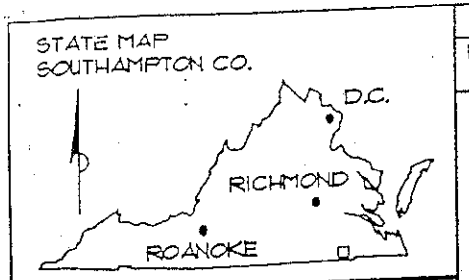
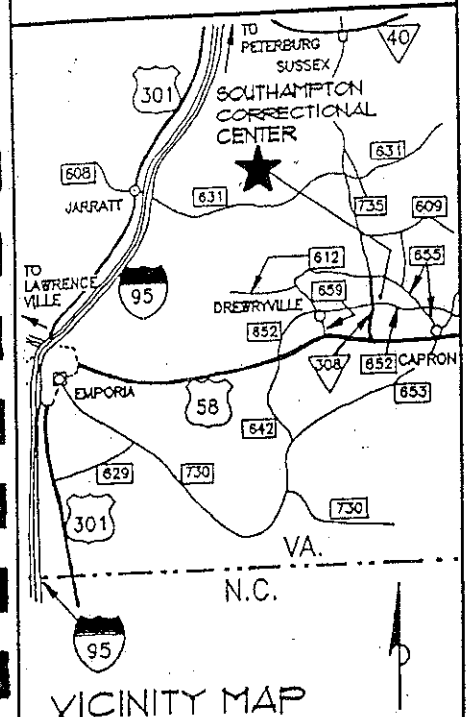


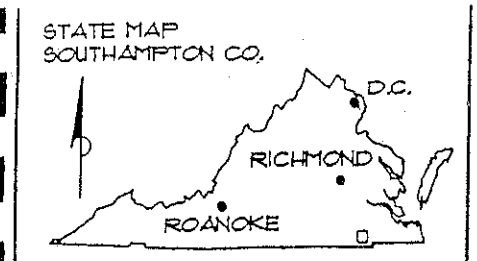


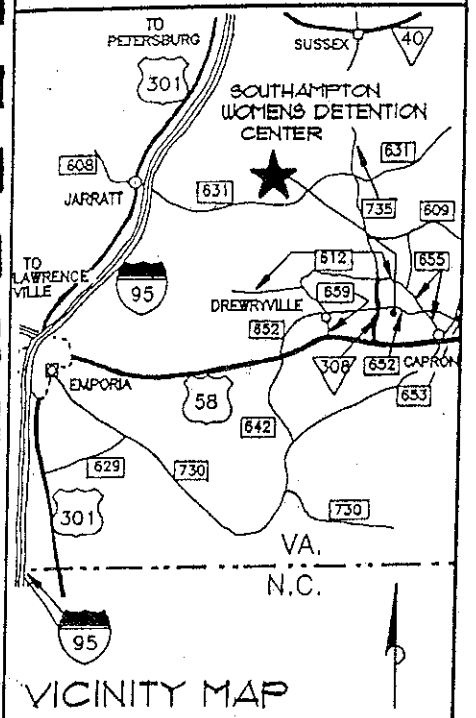
FAACS NO.	NAMES OF BUILDINGS
01	ADMINISTRATION BUILDING
02	PUMP HOUSE (WELL # 8)
03	STAFF HOUSE (WARDEN'S)
04	STAFF HOUSE
05	STAFF HOUSE
06	STAFF HOUSE
07	STAFF HOUSE
08	STAFF HOUSE
[redacted]	[redacted]
10	WAREHOUSE
11	COLD STORAGE
12	OFFICER'S CLOTHING ROOM
13	OXYGEN/ACETYLENE STORAGE
16	MOTOR POOL
19	MAINTENANCE SHOPS/STORAGE
29	MAINT. STORAGE BLDG./OFFICES
[redacted]	[redacted]
41	INDUSTRIAL BUILDING
42	GYMNASIUM
43	ELEVATED WATER STORAGE TANK
[redacted]	[redacted]
48	CANNERY

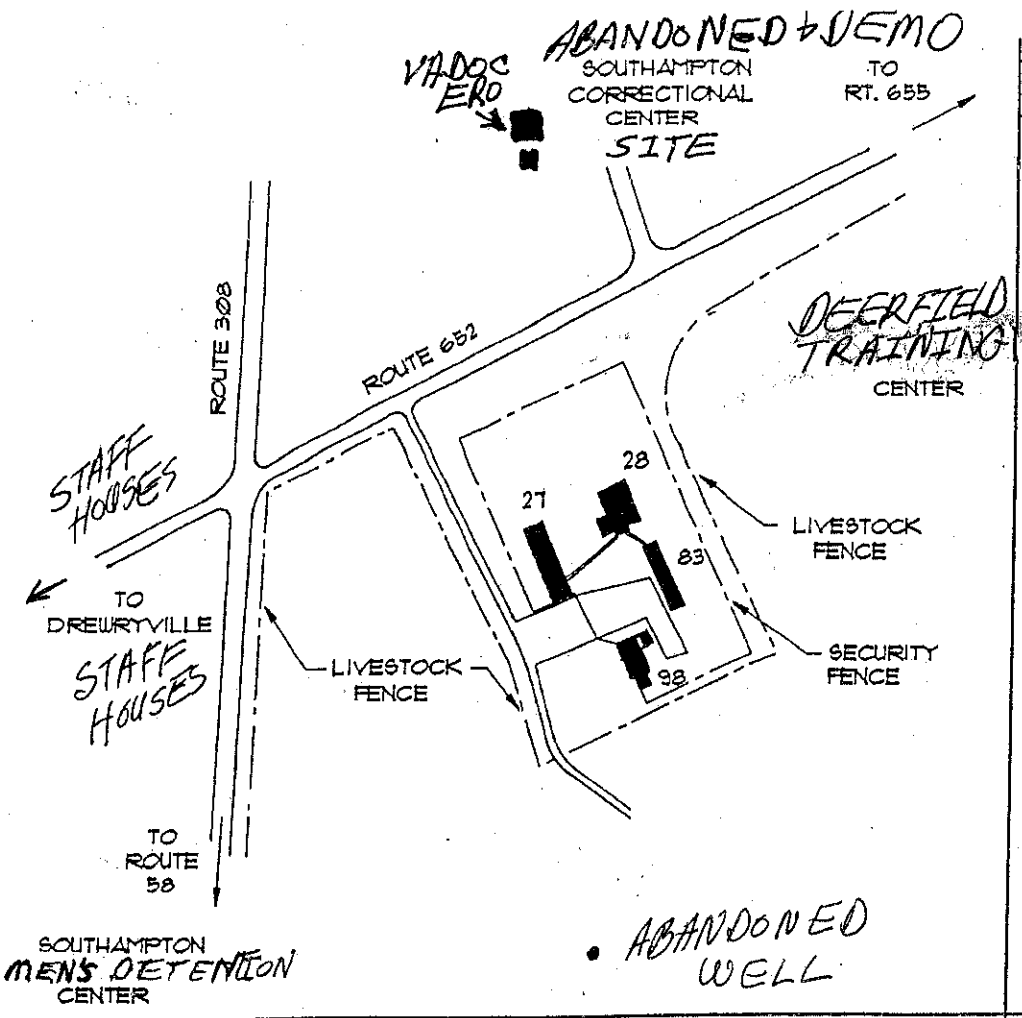
FAACS NO.	NAMES OF BUILDINGS
49	FARM STORAGE BUILDING
50	STORAGE BUILDING (SURPLUS & REC. STORAGE)
51	FARM WAREHOUSE
52	ELECTRIC SHOP
53	MAINTENANCE STORAGE
54	FARM STORAGE
55	FARM BUILDING
56	SCALE HOUSE
57	EQUIP SHED - TRACTOR SHOP
58	STORAGE - PLUMBING/KITCHEN
59	GUARDS QUARTERS
60	EQUIPMENT SHED
61	EQUIPMENT SHED
62	COMBINE SHED
63	BARN-RED BRICK
66	BULL SHELTER USED FOR STOR.
67	BULL SHELTER
68	MAINT. SHOP/WWTP STORAGE TOOL ROOM
81	DOG KENNELS
85	AMBULANCE STORAGE SHED
86	OLD HOG HOUSE/OFFICE/STOR.
87	WASTE WATER TRT. PLANT
87F	TERTIARY BUILDING
87G	SLUDGE PRESS BUILDING
88	PUMP HOUSE
89	GARAGE-DOUBLE (WARDEN'S)
90	STORAGE BUILDING (WARDEN'S)
95	TRAINING BUILDING
96	COMMISSARY
97	HAZARDOUS WASTE BLDG.
98	BIOSOLIDS STORAGE PITS

TOTAL ACREAGE OF INSTITUTION: 2,630 (ENTIRE SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1951
LENGTH OF PERIMETER SECURITY FENCING: 4,704 L.F.
BUILDING CONSTRUCTION: REINF. CONCRETE WITH BRICK VENEER
WOOD FRAME

INST. C
REGIO







FAAC NO.

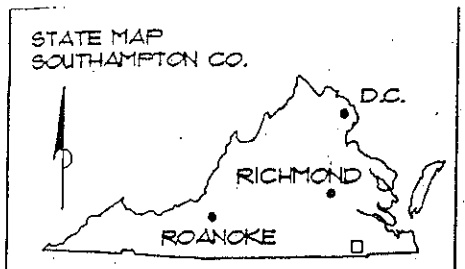
27
28
83
98

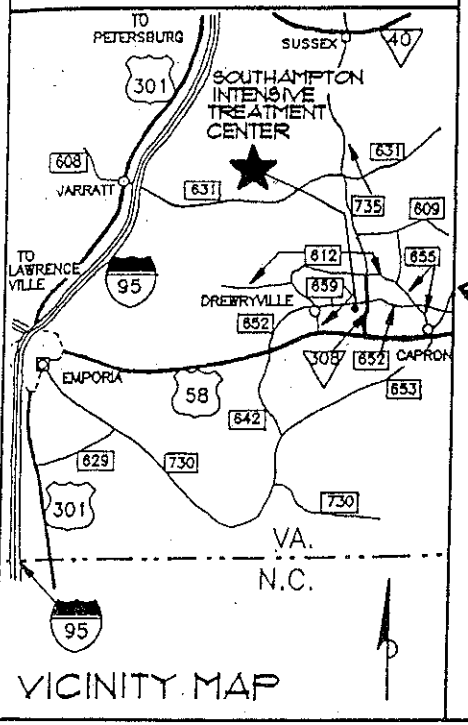
TOTAL ACREAGE OF INSTITUTION: 2,630 (ENTIRE SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1974
LENGTH OF PERIMETER SECURITY FENCING: 1,126
BUILDING CONSTRUCTION: WOOD FRAME/CONCRETE BLOCK

SITE PLAN

0 125 250 375 500

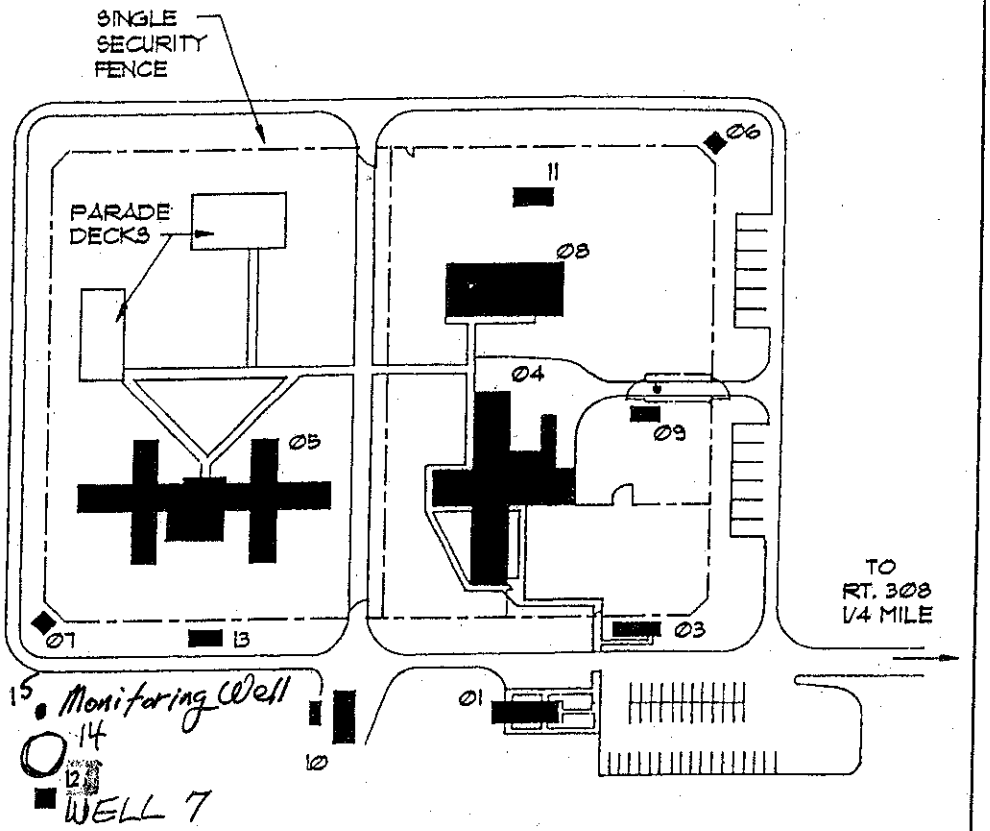
INST. REGIC





VICINITY MAP

ABANDONED WELL



TOTAL ACREAGE OF INSTITUTION: 2,690 (ENTIRE SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1981
LENGTH OF PERIMETER SECURITY FENCING: 2,292 L.F.
BUILDING CONSTRUCTION: REINF. CONCRETE BLOCK AND WOOD FRAME

SITE PLAN

0 100 200 300

FAACS NO.

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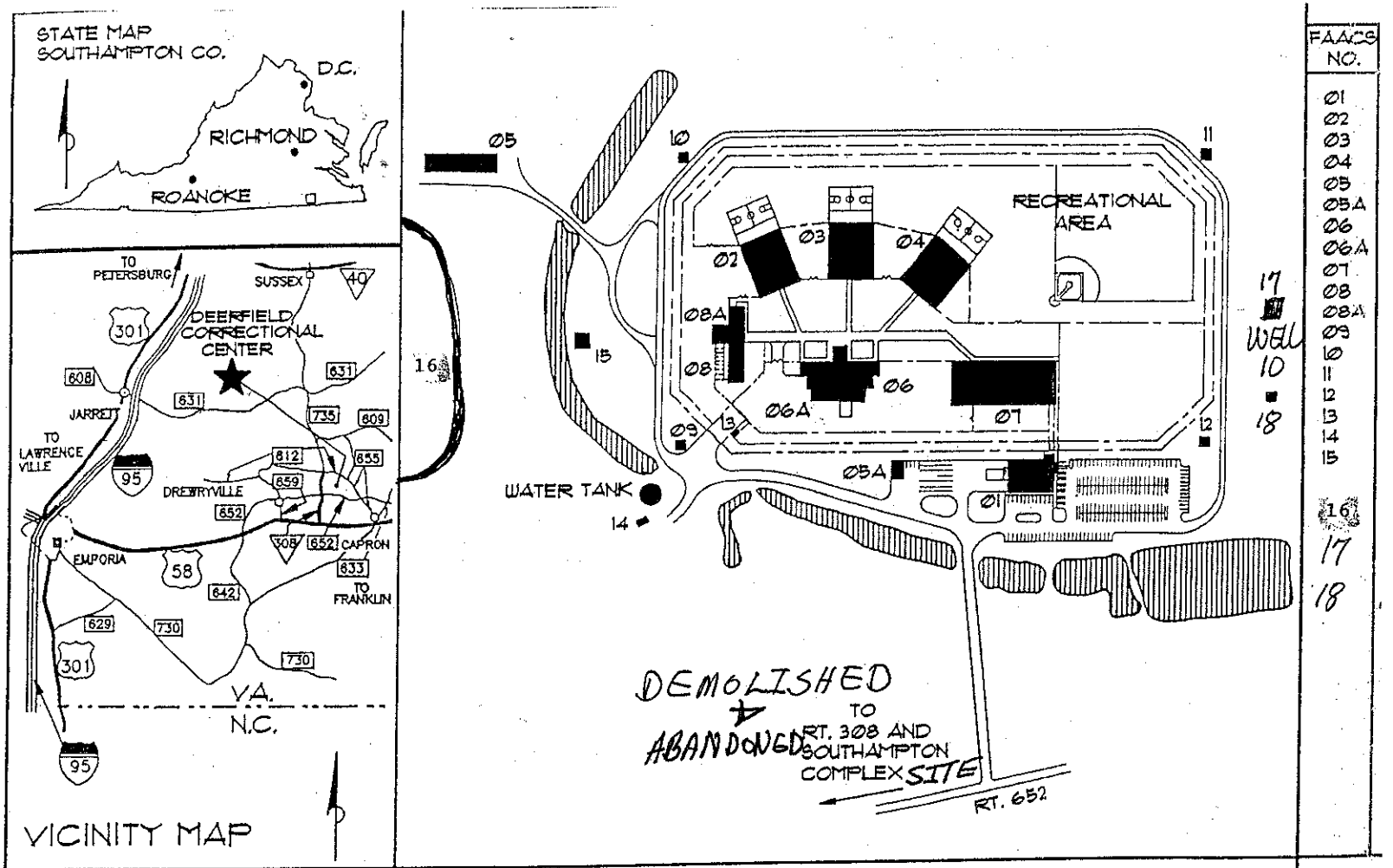
ME

INST. C
REGIO



FAACS NO.

01
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05A
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06A
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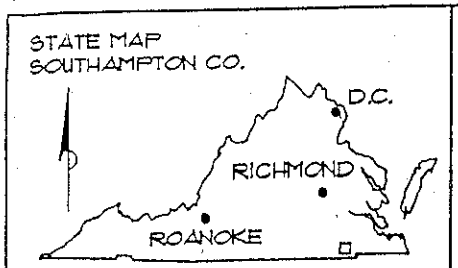
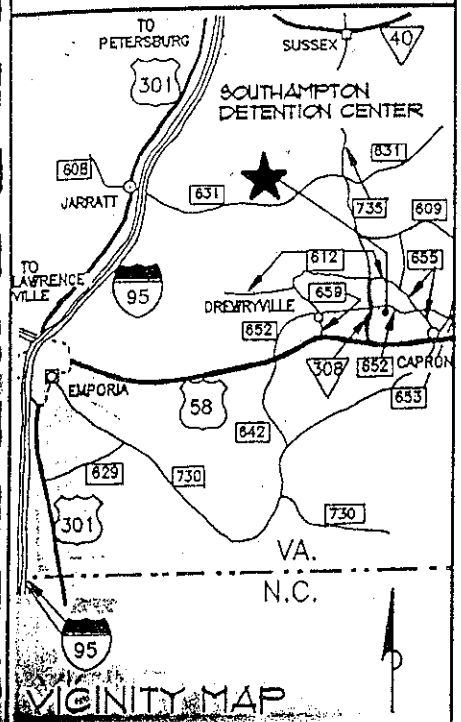
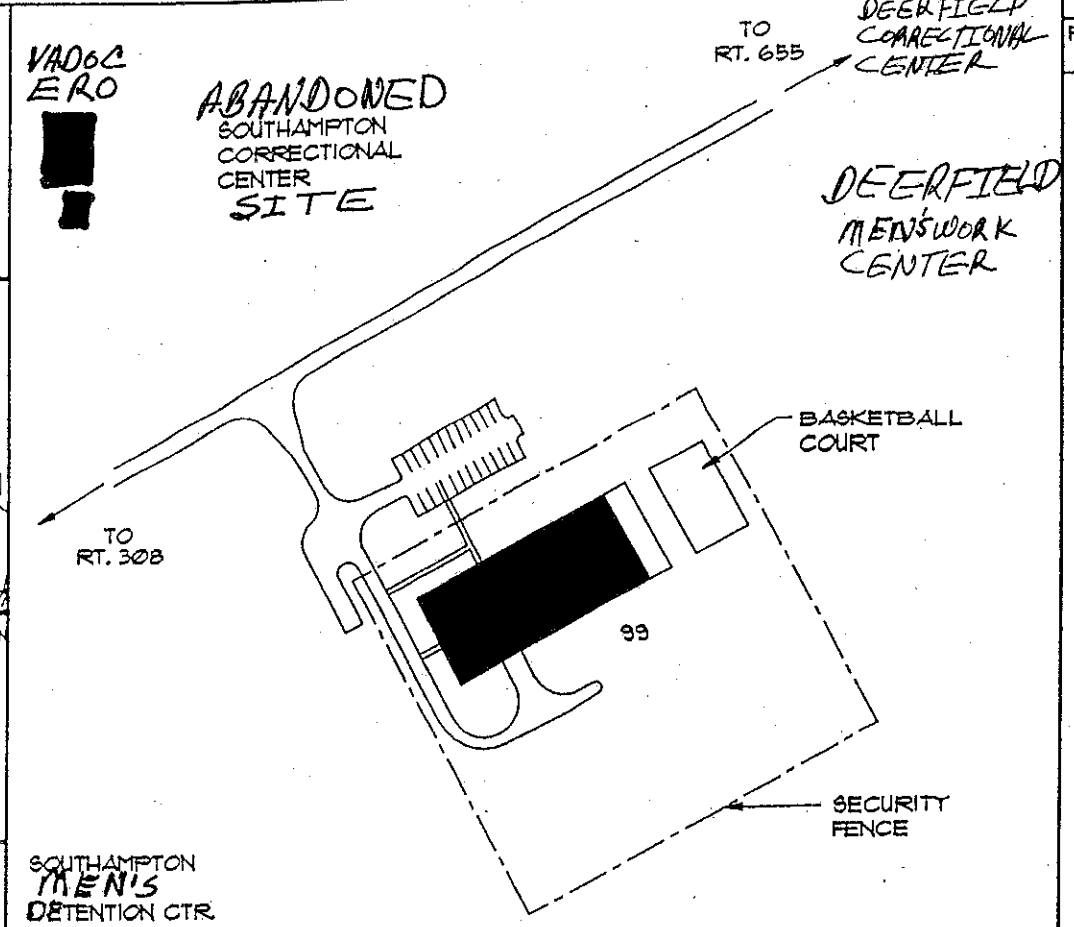
TOTAL ACREAGE OF INSTITUTION: 42 (EXCLUDING SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1994
LENGTH OF PERIMETER SECURITY FENCING: 3,500 L.F.
BUILDING CONSTRUCTION: PRE-ENGINEERED METAL BUILDING WITH CMU BLOCK, EXTERIOR INSULATION FINISH SYSTEM AND METAL ROOF

INST. CC
REGION





VICINITY MAP



SITE PLAN

0 100 200 400

FAACS NO.

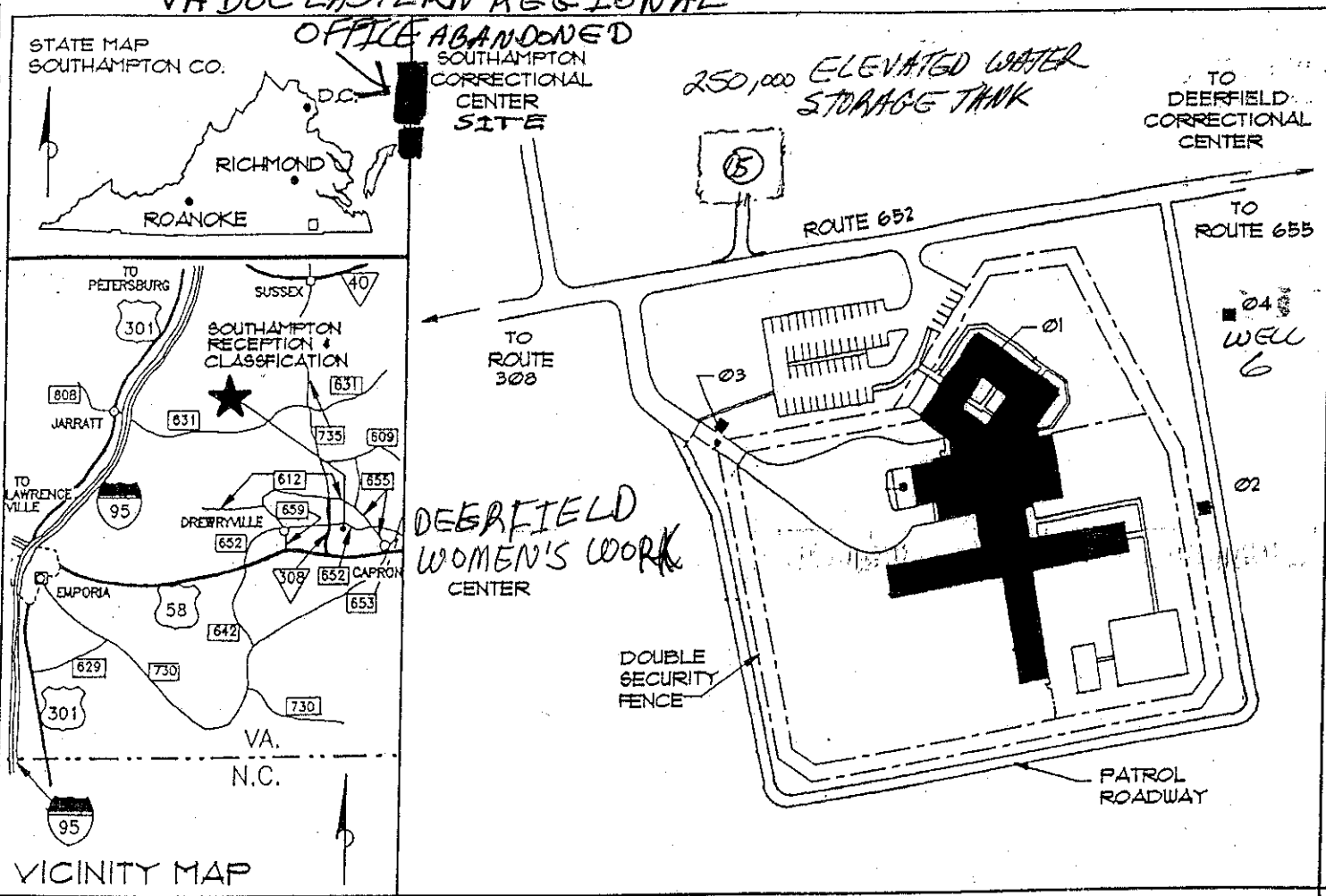
99

W.O.

INST. REGI

TOTAL ACREAGE OF INSTITUTION: 2,630 (ENTIRE SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1995
LENGTH OF PERIMETER SECURITY FENCING: 1,600 L.F.
BUILDING CONSTRUCTION: PRE-ENGINEERED METAL BUILDING

VA DOC EASTERN REGIONAL OFFICE ABANDONED



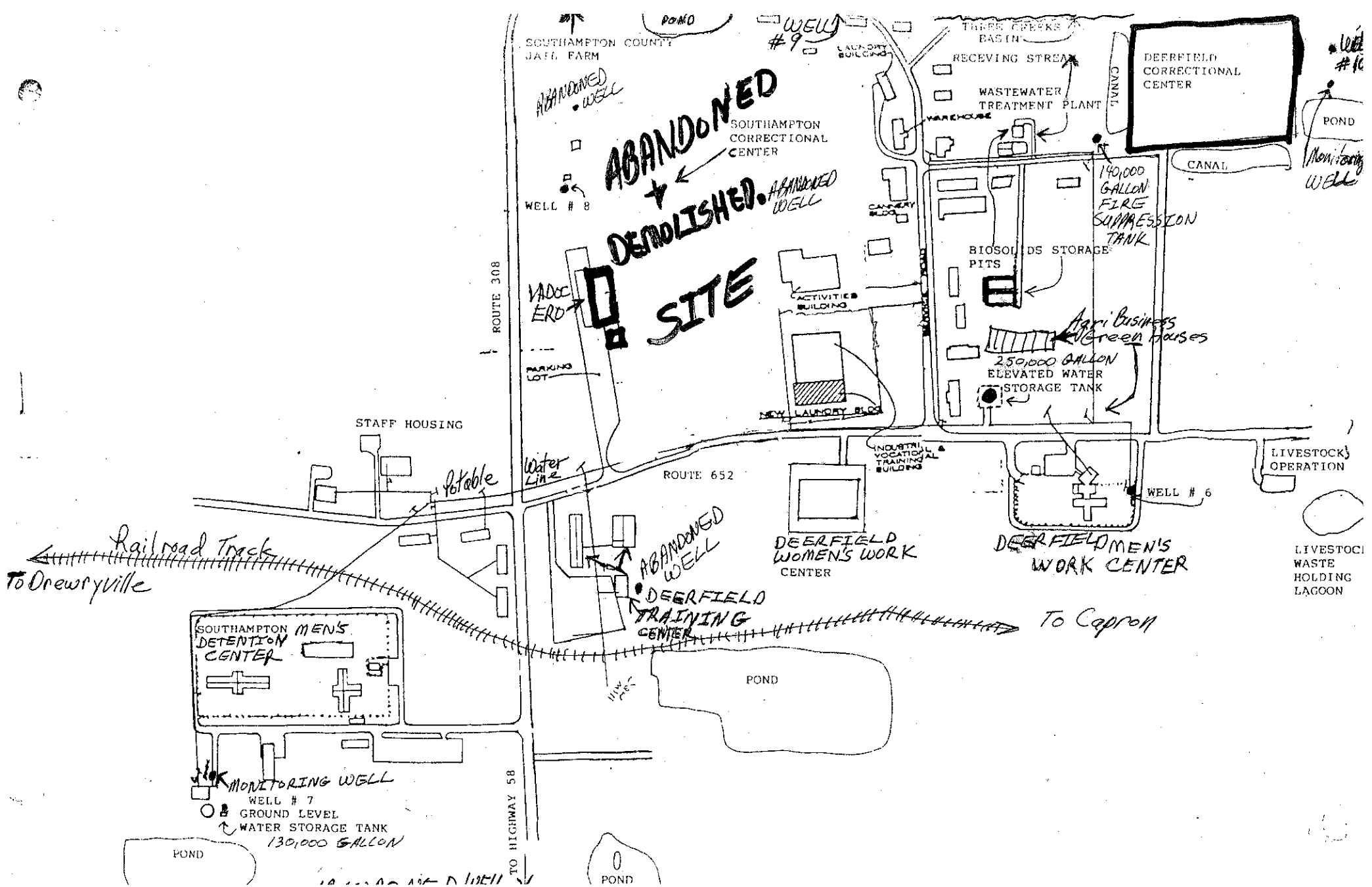
FACIS NO. 01 02 03 04 05

TOTAL ACREAGE OF INSTITUTION: 2,630 (ENTIRE SOUTHAMPTON COMPLEX)
DATE OF MAIN STRUCTURES: 1977
LENGTH OF PERIMETER SECURITY FENCING: 4,450 LF.
BUILDING CONSTRUCTION: REINF. CONCRETE BLOCK W/BRICK VENEER AND PRECAST CONCRETE ROOF

SITE PLAN

0 100 200 300

INST. COD


SOUTHAMPTON COUNTY JAIL FARM
POND
WELL #9
LAUNDRY BUILDING
THREE CREEKS BASIN
RECEVING STREAM
WASTEWATER TREATMENT PLANT
WAREHOUSE
DEERFIELD CORRECTIONAL CENTER
CANAL
POND
Monitoring WELL
ABANDONED WELL
ABANDONED
DEMOLISHED.
SITE
SOUTHAMPTON CORRECTIONAL CENTER
WELL # 8
ABANDONED WELL
CANOPY BLDG.
140,000 GALLON FIRE SUPPRESSION TANK
BIOSOLIDS STORAGE PITS
VADOC ERD
ACTIVITIES BUILDING
ROUTE 308
PARKING LOT
Agri Business & Green Houses
250,000 GALLON ELEVATED WATER STORAGE TANK
NEW LAUNDRY BLDG
STAFF HOUSING
Water Line
ROUTE 652
INDUSTRIAL & VOCATIONAL TRAINING BUILDING
LIVESTOCK OPERATION
WELL # 6
Railroad Tracks
To Drewryville
ABANDONED WELL
DEERFIELD TRAINING CENTER
DEERFIELD WOMEN'S WORK CENTER
DEERFIELD MEN'S WORK CENTER
LIVESTOCK WASTE HOLDING LAGOON
To Capron
SOUTHAMPTON DETENTION CENTER
MEN'S
POND
MONITORING WELL
WELL # 7
GROUND LEVEL
WATER STORAGE TANK
130,000 GALLON
TO HIGHWAY 58
POND
POND